

Remarks

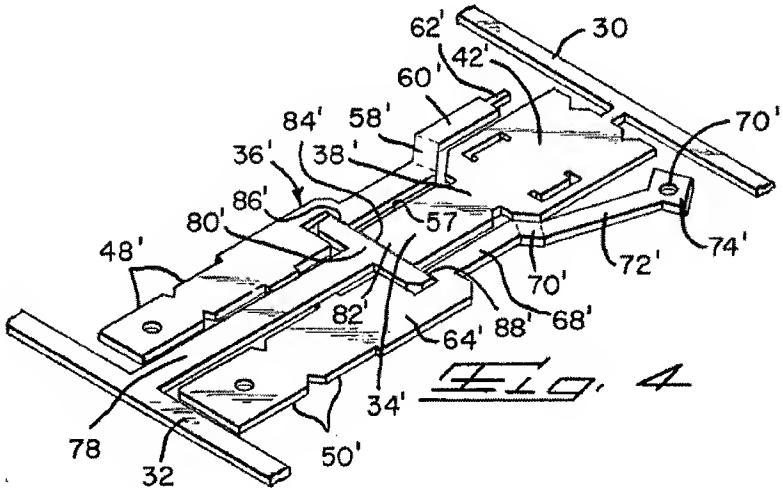
The Office Action dated June 26, 2009, lists the following new grounds of rejection: claims 1-3, 7, 9-13 and 15 stand rejected under 35 U.S.C. § 102(b) over Coldren (U.S. Patent No. 4,252,864); and claims 8 and 14 stand rejected under 35 U.S.C. § 103(a) over the ‘864 reference in view of Sakamoto (U.S. Patent No. 6,975,022). Applicant traverses all of the rejections and, unless explicitly stated by the Applicant, does not acquiesce to any objection, rejection or averment made in the Office Action. As various rejections are repeated from the previous Office Action without addressing Applicant’s traversals (contrary to the requirements of M.P.E.P. § 707.07(f)), Applicant fully incorporates its traversals of record herein.

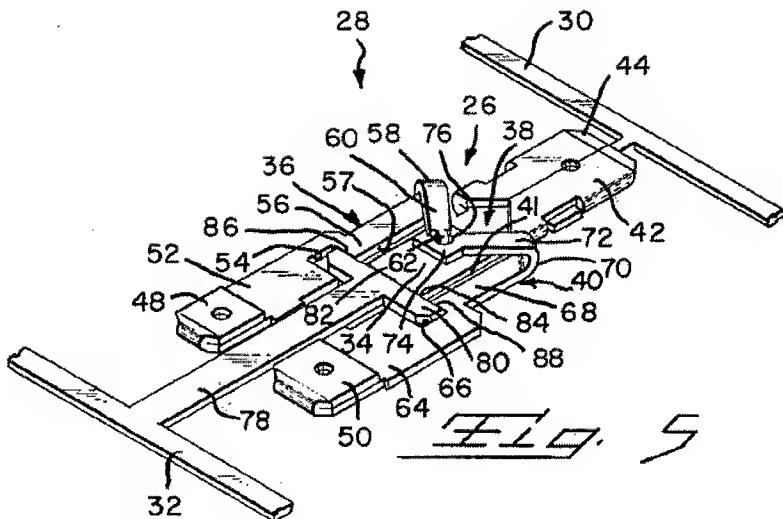
The rejections of record have failed to directly address all of Applicant’s claim limitations, in relying upon general citations as allegedly corresponding to *entire* claims, without providing any explanation as to where in the cited references correspondence is provided to each of multiple claim limitations. Despite Applicant’s traversals, the Response to Arguments section attempts to address only a few limitations, yet in doing so fails to overcome the lack of correspondence, while further ignoring multiple limitations to which specific correspondence has not been asserted. The instant Office Action also fails to address multiple claim limitations as presented via amendment in Applicant’s previous response of record. In short, the Office Action has failed to clearly explain “[t]he pertinence of each reference” so that “the applicant has the opportunity to provide evidence of patentability and otherwise reply completely” as required under M.P.E.P. § 706. Accordingly, Applicant believes that all rejections are improper for failing to establish correspondence to the claimed invention. The following addresses this lack of correspondence in greater detail, as well as the impropriety of the rejections under § 103 in view of the lack of motivation/teaching away in the references themselves.

The § 102(b) and § 103(a) rejections, each of which is based upon the ‘864 reference, are improper because the Office Action has not established correspondence between the cited ‘864 reference (either alone or in combination with the ‘022 reference). For example, none of the asserted references provides correspondence to a lead frame having non-engaging end portions that electrically connect to opposite sides of a semiconductor element (*see, e.g.*, independent claims 1 and 3). In contrast, the

correspondence alleged in the Office Action (see page 13) is not directed to a lead frame, and instead describes a contact on a semiconductor element (chip) itself (see “contact area 24” in Figure 3). As a further example, neither reference teaches aspects regarding a lead frame having connection conductors that are located within an outer perimeter of the frame, and connectors that respectively freely extend in order to secure a semiconductor element (*i.e.*, the Office Action cites to connectors that are fixed at both ends). Because neither reference teaches these aspects, no reasonable interpretation of the asserted prior art, taken alone or in combination, can provide correspondence. As such, the rejections fail.

More specifically, referring to Figures 4 and 5 of the ‘864 reference below, the asserted “connection conductors” (*e.g.*, 74) is not within a perimeter of any lead frame, and the lower supporting region 34 (a central portion of the lead frame engaged to carrier strips 30 and 32) is thus fixed at both ends. Accordingly, these cited portions of the ‘864 reference fails to correspond to claim limitations as asserted, including those directed to connectors having a “non-engaging end portion within a perimeter of the frame” (*see* independent claim 1) and/or having “freely extending end portions” (*see* independent claim 3).





In addition, while end portions 62 and 74 are not engaged, they both connect to the same side of a chip (see, e.g., Figure 5 above, showing end portion 62 extending into an opening 70 in end portion 74). Thus, there is no disclosure of two end portions that respectively engage opposite sides of a semiconductor element as claimed.

The cited portions of the ‘864 reference also fail to provide correspondence to other specific claim limitations, such as the method-based limitations in claim 5 (and relative to claim 13) directed to characterizing the bends of the connection conductors. For instance, respective portions of a lead frame are bent at 90 degrees along an out-of-plane bending axis, with an end of the conductor corresponding to the thickness of a semiconductor element again bent through 90 degrees. The Office Action’s apparent attempt (see page 13) to address Applicant’s traversals regarding these matters amounts to an unsupported assertion of what the cited conductors “would have to go through” without providing actual correspondence to these limitations (in violation of § 102, yet further failing to show motivation/suggestion under § 103). Regarding the Examiner’s indicated confusion of the limitations in claim 13, Applicant notes the cited references similarly fail to disclose related limitations involving connection conductors bent along axes at oblique angles as claimed, with respective arrangements.

In view of the above, Applicant therefore requests that the § 102(b) rejections be removed.

Applicant further traverses the § 103 rejection of claims 8 and 14 because the cited references teach away from the Office Action's proposed combination, as

established by Applicant's traversals of record. The Response to Arguments section of the Office Action recites some unrelated argument about what claims 8 and 14 mention, but fails to address Applicant's traversals identifying improprieties with the proposed combination of references. That is, Applicant is not asserting that claims 8 or 14 require moving a semiconductor element, but rather that combining the references as asserted to arrive at the claimed invention would entail moving the member 30 as consistent with the Office Action. However, the '022 reference explicitly teaches away from such movement in teaching that member 30 is fixed in place. The proposed combination of references thus directly contradicts the purpose and teachings of the '022 reference.

Consistent with the recent Supreme Court decision in *KSR*¹, M.P.E.P. § 2143.01 explains the long-standing principle that a § 103 rejection cannot be maintained when the asserted modification undermines either the operation or the purpose of the main reference - the rationale being that the prior art teaches away from such a modification. *See KSR at* 1742 ("[W]hen the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be non-obvious."). Under M.P.E.P. § 2143.01, the rejections cannot be maintained.

The § 103(a) rejection of claims 8 and 14 over the '864 reference in view of the '022 reference are also improper because the cited references fail to provide correspondence to claims 8 and 14 as asserted. As the Office Action has (again) cited to multiple figures and discussion without providing a clear explanation as to which portions of the references discuss limitations (*i.e.*, those directed to a hole and to a pusher member), Applicant has reviewed the references but cannot ascertain (operable) disclosure of various claim limitations. For instance, the cited portions of columns 8 and 9 of the '022 reference do not appear to discuss any pusher member or moving any semiconductor element, which is consistent with the Office Action's indication (*see* page 14) that "[t]he word "push" can be defined to "press against forcefully without moving." While Applicant appreciates the Examiner's definition, this definition fails to provide correspondence to claim limitations directed to pushing a semiconductor element "between the connection conductors" (*i.e.*, by moving the element). Accordingly, neither reference discloses moving a semiconductor element with a pusher member as claimed.

¹ *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007)

As pointed out in Applicant's previous response of record, claim 16 was not listed in the statement of any rejection as required by the M.P.E.P. and under applicable law. The instant Office Action again fails to list claim 16 as rejected under §§ 102, 103 or otherwise. While claim 16 is discussed after certain rejections under § 102, the Office Action has not clarified any rejection of claim 16 by listing any reference under which the claim is rejected or otherwise including the claim in any statement of rejection. Accordingly, as the record stands (for Appeal), Applicant would understand that no valid rejection of claim 16 remains.

In view of the above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063 (or the undersigned).

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